



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,714	08/08/2006	Shin Satou	Q95856	2448
23373 7590 09/11/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER ANGEBRANDT, MARTIN J				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
09/11/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,714

**Applicant(s)**

SATOU ET AL.

**Examiner**

Martin J. Angebrandt

**Art Unit**

1795

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/02)
- Paper No(s)/Mail Date 08/08/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1-6 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"consinting" is a misspelling in line 2 of claim 8

To facilitate the functionality as a holographic recording medium, the claims must recite a photopolymerization initiator. (claims 1-6 and 8-10)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,4-5,7 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dhar et al. '227.

The use of a photoinitiator in a holographic recording medium where the initiator is a mixture of a dye and a tertiary amine is disclosed as an alternative or Igracure 784 or H-Nu-470

[0026]. The matrices are chosen such that the reactions of the curing of the matrix and the holographic recording are independent [0029]. The compatibility can be improved by incorporating a reactive group into the matrix which reacts with the monomer used in the holographic recording [0037]. The use of a polyol diisocyanate composition which is cured using dibutyltin laurate for the matrix is disclosed in examples 1, which uses Irgacure 784 as the initiator and chlorophenyl acrylate as the monomer is added to a vial [0045].

The examiner holds that one would immediately envision the media using the dye tertiary amine photoinitiator system in place of the Irgacure 784, based upon the limited choices disclosed at [0026] for free radical polymerizable systems. If this not upheld, the examiner alternative holds that it would have been obvious to modify the medium of example 1 by using a mixture of a dye and a tertiary amine, such as N-methyl diethanol amine with a reasonable expectation of forming a useful holographic recording medium based upon the disclosure of equivalence.

6. Claims 1,4-5 and 7-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dhar et al. '227, in view of Al-Akhdar et al. '298 or Snowwhite et al. '025.

Al-Akhdar et al. '298 teaches that free radical polymerization can be accelerated by the addition of amines, such as triethanol amines, N-methyl-diethanolamine, ethyl p-dimethylaminobenzoate [0101].

Snowwhite et al. '025 teaches that free radical polymerization can be accelerated by the addition of amines, such as triethanol amine, dimethylethanolamine, dimethylaminoethyl acrylate, N-phenylglycine, N-methyl-N-phenylglycine, triethylamine, diethylamine, N-

methyldiethanol amine, ethanolamine, 4-dimethylaminobenzoic acid, methyl 4-dimethylbenzoate, ethyl 4-dimethylaminobenzoate (16/33-51).

To address embodiments bounded by the claims, but not anticipated or rendered obvious above, the examiner cites Al-Akhdar et al. '298 or Snowwhite et al. '025 and holds that it would have been obvious to modify the media of Dhar et al. '227 by using other tertiary amines, such as triethanol amine, ethyl p-dimethylaminobenzoate, methyl 4-dimethylbenzoate or triethylamine, in place of the N-methyl-diethanolamine with a reasonable expectation of achieving comparable results.

7. Claims 1-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dhar et al. '227, in view of Al-Akhdar et al. '298 or Snowwhite et al. '025, further in view of Shioda et al. '295.

Shioda et al. '295 teaches in production example 1, a 2-isocyanatoethyl methacrylate reacted in a reaction cured with dibutyltin laurate. (27/8-30). The preparation do urethane acrylates to control the crosslinking in the photocured resin is disclosed (18/31-49).

In addition to the basis above, the examiner cites Shioda et al. '295 and holds that it would have been obvious to one skilled in the art to modify the medium rendered obvious by the combination of Dhar et al. '227 with (Al-Akhdar et al. '298 or Snowwhite et al. '025) by adding an acrylate or methacrylate monomer containing a isocyanate moiety as a means to facilitate the incorporation of a reactive moiety into the matrix and increase compatability discussed in Dhar et al.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin J Angebranndt/  
Primary Examiner, Art Unit 1795

Martin J Angebranndt  
Primary Examiner  
Art Unit 1795

9/9/08